

Exploring the Lost Link between TQM, Innovation and Organization Financial Performance through Non Financial Measures

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Abstract. Total Quality Management and Innovation, both are regarded as key competitive factors that are deeply embedded into organizational structures products, processes, and services. The main objective of this paper is to explore the missing link in literature between Total Quality Management, innovation and organization non financial and financial performance. After a detail review of literature the paper presents a new research framework through an integrated Total Quality Management, innovation-performance analysis. The new framework is based upon the principle that quality management practices as well as different types of innovation are interlinked within their respective domains and there exists a more indirect effect of innovation on firm's financial performance through non financial performance measures such as innovative, production and market performance.

Keywords: Total Quality Management (TQM), innovation, organization financial performance.

1. Introduction

Companies around the world have given considerable attention towards improving the quality of different types of products and services they provide to their customers. Starting from the top management to bottom level employees all are dedicated in fulfilling their customer's need in a more timely fashion, thus ensuring customer satisfaction. Companies such as Motorola, General Electric, Honeywell, Sony, Caterpillar, Johnson Controls, and DHL, who have always claimed substantial financial benefits, have laid strong emphasis in improving the quality of products and services with the persuasion of different programs, particularly Total Quality Management (TQM). At the same time they have also restructured their R&D policies in search of new innovative products and processes to capture new customers in highly saturated domestic and foreign markets. Since from the start of late 1980's, both public and private firms are using TQM principles as means of achieving higher level performance in their organizations. As Total Quality Management plays a key role in organization performance, the role of Innovation cannot be neglected in meeting the needs of existing customers or creating a new product or service for emerging customers [1]. Some authors argue that changing marketing conditions have also changed the winning order criteria from quality to innovation. Thus quality is now regarded as the qualifying criteria. The advocates of innovation consider "innovation" as core engine that provides extra strength and ensures long-term firm success [2]. Before further exploring the lost link between Total Quality Management, innovation, and firm performance, it is extremely important to understand the meaning of innovation from researcher's perspective.

2. Innovation

One of the most comprehensive definitions which is widely adopted by the research studies states that, "innovation is defined as an internally generated or purchased device, system, policy, program, process, products or services that is new to adopting organizations" [3]. But being innovative for firms means more than having an idea. It is risk taking and investment but the payoff is substantial. It is not a matter of just earning profits but a matter of survival for firms. In today's global market place it is regarded as a core competency of organizations to successfully manage innovation. In other words organizations internal as

well as external process must be well positioned, to function smoothly for innovation to emerge as a competency. The different types of innovations according to OECD Oslo manual [4], are product, process, marketing and organizational innovation. Product and process innovation belong to Technological Innovation at large [5]. The main objective of the product innovation is to fulfill the requirement of customers or external market. In terms of degree of innovation, product innovation is further divided into radical product innovation and incremental product innovation [6]. Whereas the main purpose of process innovation is the introduction of a new element in material, machinery, process, and workflows [7]. Process innovation is highly focused on improving productivity [8]. As in [9], it is process innovation that enables organizations to produce fairly large amount of products or services using limited available resources of an organization. Just like product innovation, process innovation is also further categorized as incremental process innovation and radical process innovation [6]. According to Oslo Manual [4] introducing new marketing methodologies such as product design or packaging, placement promotion and pricing fall in the domain of marketing innovation. The major focus of marketing innovation is to address the customer needs and increase the sales volume of the firm by means of introducing new markets or through positioning a product on the market. Therefore marketing innovations generally incorporate all kinds of major changes in product design that are part of a new marketing concept. Such type of product design changes does not change the product's user characteristics or functionality. An organizational innovation also referred by many researchers as administrative innovation, is the implementation of a new working methodology in an organizations running business practices, systems, processes, workplace, or external relations [10]. These innovations are made with the intention to improve a firm's performance. Sometime such type of innovations requires mega structural changes and big costs at initial stages. In the longer run performance scales are achieved through reduction in cost factors that are administrative or transactional in nature, improving workplace satisfaction and thus substantial upward trend in labor productivity is observed, gaining access non-codified external knowledge or reducing costs of supplies.

3. TQM-Innovation Relation

Total Quality Management-Innovation literature reveals both positive and negative views of the scholars on the relation between Total Quality Management and innovation. These views are based over the principle of customer focus that leads organization for a constant search of new needs and expectations, thus making organization more innovative to meet the continuous market change. The rapid changes in the market also lead to changes in competition. Only innovative firms that go beyond the customer expectation and thoughts are going to survive as they have set innovation as winning order criteria. Literature suggests that innovative companies are first movers in the implementation of standards. It is worth mentioning here that world class manufacturing organizations especially high tech organizations involve their suppliers during the process of innovation. This new trend has given birth to collaborative effort by the supplier and manufacturer to meet the rapidly changing business environment and demands of the customers that generally change unexpectedly.

Positive school of thought favoring TQM-innovation correlation is of the view that organizations that have embedded TQM in their organization culture provide a fertile ground for the growth of innovation, as Total Quality Management embodies those principles that are similar to the principles of innovation [11]. As [12], [13] are of the view that different elements of Total Quality Management react differently in adding value to innovation. Flynn further argues that fast, medium, and slow product innovations based on Total Quality Management elements are significantly different from one another. One of the research studies conducted by [14] in Ireland asked organizations to enhance their continuous improvement programs as they provide a concrete base for building an innovative organization. From the point of view of few researchers as [15] suggested examining Total Quality Management strategy of companies, as one best solution to differentiate between innovative and non innovative companies. They are of the opinion that TQM as a management strategy has significant contribution in developing creative organizations. Many QM scholars such as [16] have presented Total Quality Management as management model that promotes and manages innovation.

According to few scholars the internal determinants of innovation are positively related to a set of QM practices [17]. As [18], in a review of 108 empirical studies conducted between 1993 and 2003, concluded that the internal determinants of innovation can be divided into seven main areas namely “leadership and management team, organizational strategies, culture, firm structure, control activities, functional assets and strategies, and general characteristics of firms”. Some other scholars [19] argued that innovation is affected by a variety of factors, such as people, top management leadership, organizational structure, and culture. Another view on the relationship between TQM and innovation is as follows. Organizations, work in a more systematic fashion. They first identify what their customers’ needs are. Secondly they try to produce innovative products or services at a much higher pace than their competitors. Finally organizations try to standardize their processes using QM models such as ISO 9001 quality management systems [20].

As mentioned earlier there is more inconsistency as far as effect of QM on innovation is concerned. Some studies found that the adoption of QM is positively associated with innovation [21],[22] while other studies reported that there is no clear evidence to statistically prove the positive effects of QM on innovation [24]. The study conducted by [25] on Canadian firms strongly supports the notion that Quality Management practices are interlinked to each other and they have a significant direct or in direct relationship with innovation. As [25] found that there exists a positive relationship between process management and radical process innovation, radical product innovation, incremental process innovation, incremental product innovation and administrative (organizational) innovation. Similarly [26] found a positive and significant relationship between QM practices and product innovation. In a study conducted by [23] on manufacturing and non manufacturing firms found out a positive and significant relationship between QM practices and product and process innovation. Furthermore, earlier studies produced different arguments on which QM practice plays a more important role in creating innovation but they do agree that QM practices have a relation with innovation and doesn’t totally ignore it. Some studies argued that only behavioral QM practices - leadership and people management are closely associated with innovation [27]. Others found that not all, but both behavioral and mechanistic QM practices - leadership, people management, process management, and product design - have a positive and direct relationship to innovation [28],[29]. Overall, the literature indicates that QM practices does have an impact on innovation but also demand for more in-depth analysis as most of the studies are conducted in the developed nations and very few in developing countries.

4. Innovation and Firm Performance

At the present time due to global competition companies have started reviewing periodically their innovation strategy to gain a competitive edge [30]. The link between innovation and firm performance is quite critical and may researchers have failed to observe a direct link between a specific type of innovation and firm’s financial performance. Innovation has a purpose of newness in the economic area or it is conceived as transformation of knowledge to commercial value. According to [31] the growth of an organization suffers more when its starts losing the concept of newness and innovation. As [32] stressed that for the organizations to grow, sustain, and be competitive, innovation is the only key. On the other hand [33] in an empirical analysis observed more indirect effect of innovation on firm performance. Literature also provides some evidence that innovative firms are in far better position to meet the external pressures of the changing markets as compared to non innovative firms. It would be worth mentioning here that every organization uses an integrated approach thus focusing on many aspects simultaneously such as new products, new organizational and marketing practices, or process technologies [34],[35]. In other words these different kinds of innovation are somewhat interlinked and strongly impact corporate performance. Therefore one need to examine this link closely as it leads to better financial outputs.

4.1. Integration between innovation types

In the literature there exists scarcity on linkage focused research. Therefore only few researchers have attempted to run investigation on linkage focused research on innovation. According to [36] administrative innovation has positive relationship with technical innovation. In one of the studies by [37] also suggested a positive relation between administrative innovation and process innovation. According to [38] administrative innovation, product innovation and marketing innovation are strongly correlated. Organizational innovation

has positive impact on marketing innovation [39]. In one of the studies conducted by [40] on British companies concluded that improvement of processes is a driving force for the success of product/service innovations. Similarly marketing and product innovation are also positively related, higher the level of marketing innovations higher the level of product innovation [39].

As for as the impact of different types of innovations on firms financial performance is concerned, literature does not support any direct relation. Rather the relation is more indirect in nature through other types of performance measures such as innovative performance, production performance and marketing performance. In this regard results of the study conducted by [40] are more reliable where he showed that different types of innovations are related to innovative performance. Similarly the study conducted by [39] on Turkish firm's also showed a significant positive correlation of organizational innovation, marketing innovation and process innovation on innovative performance. According to [41] innovative performance in the form of new product success contributes to firms sales and gaining market share by satisfying old customers and attracting new customers. [42] laid emphasis that organization learning, increase in speed and quality of operations is triggered by continuing efforts and higher levels of innovation performance. Beside speed and quality, flexibility and cost efficiency are other two essential elements of production performance and are strongly linked to innovative performance. Operational flexibility and decrease in related cost are enhanced if proper renewal efforts are laid down in administrative, production processes and new product development [42]. Similarly [43] stressed that there exists a positive relationship between operational flexibility and new product success. [44] also supported the idea that few process innovations leads cost savings thus organizations can market products at more competitive prices. One can strongly argue that production performance which is indicated by speed, quality and cost efficiency is positively affected by innovative performance. [39] in their study of Turkish firms confirmed that greater innovative performance leads positively to market and production performance.

It is quite evident at this stage that production and operations functions are the source of competitive advantage for organizations. Improved production process in terms of speed, flexibility, and cost efficiency in routine daily operations enhances efficiency and thus improves the market and financial position of the firm. [45] is of the view that manufacturing capabilities contribute to market performance through increase in satisfaction level of customers and by making improvements in customer relations.

According to [39] production performance has a significant relationship with market performance. As production performance is achieved through combined effect of factors such as quality, flexibility, speed and cost efficiency, are generally regarded as a driving force behind the profitability of the organization [46]. According to [47] those firms who have made substantial investments in quality efforts have gained higher financial rewards. One can conclude then that higher production efficiency results in increase in financial position of the firms. One other important factor that contributes to firm's financial performance in today's customer driven market is the number of loyal customers [48]. As marketing growth and sales growth directly contribute to the profits of the organization through increase in price premiums and sales revenues, by decreasing marginal unit costs thus leading to significant overall profits [41]. Therefore once can infer that financial performance is an output of innovative, production and market performance. Initial cost and penalty of adopting new technology is one of the basic reasons of associating innovative performance to non-financial aspects of corporate performance, such as increased customer satisfaction or production speed, which will lead to higher financial results in longer terms. In otherworld's innovative performance can impact positively on firm production, market and financial performance in the longer run, while in the short run, consumption of internal resources and investment in new technology possibly can cause minor losses at beginning stages[49].

5. Conclusion and Future Research Direction

In light of the above discussion it could be concluded that there exists a link between TQM, innovation, and firm's non financial and financial performance. Though no direct link between innovation and firms financial performance exists, yet through an interlocking principles between the different set of organizational practices this link is strengthen. It will be worth examining empirically whether an organizations financial performance is improved when an organization practices Total Quality Management,

particularly when different TQM practices are interlinked to each other. For example an organization having implemented ISO 9000, into its systems and procedures, enhances the innovative performance that in turn increases production and marketing innovative capabilities that directly influence financial position of the company? As Total Quality Management has both mechanistic and organic set of practices, it will also be an interesting effort to explore which practices as a group have more impact on innovative performance, consequently the financial performance. The relation between TQM and marketing innovation has not been studied explicitly in literature and therefore requires more investigation. The current study would explore this relationship and try to fulfill the gap in literature. A SEM modeling approach would be the most appropriate method to investigate this relationship. The author has currently been developing questionnaire to conduct a cross cultural analysis.

6. References

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